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PART III

DEPARTMENT OF COMMERCE

Office of the Secretary

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NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM

Thermal Insulation Materials; Final Finding of Need and Establishment of Criteria Committee

[3510–19]

DEPARTMENT OF COMMERCE

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NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM

Final Finding of Need To Accredit Testing Laboratories That Test Thermal Insulation Materials

AGENCY: Assistant Secretary of Commerce for Science and Technology, Commerce.

ACTION: Notice of final finding of need.

SUMMARY: Pursuant to the Procedures for a National Voluntary Laboratory Accreditation Program (15 CFR Part 7), this notice announces the Secretary's final finding of need to accredit testing laboratories that test thermal insulation materials, and thereby establishes a voluntary laboratory accreditation program to accredit such laboratories. The notice also sets out the basis for the finding of need and identifies applicable product standards, test methods and recommended practices for which testing laboratories would be required to demonstrate competence in order to be accredited. In addition, the notice advises that a separate notice is being published simultaneously with this notice announcing the establishment by the Secretary of Commerce of a National Laboratory Accreditation Criteria Committee for Thermal Insulation Materials to develop and recommend general and specific criteria for use in accrediting testing laboratories that test thermal insulation materials.

EFFECTIVE DATE: October 12, 1977.

FOR FURTHER INFORMATION CONTACT:

Dr. Howard I. Forman, Deputy Assistant Secretary for Product Standards, Room 3876, U.S. Department of Commerce, Washington, D.C. 20230 (202–377–3221).

SUPPLEMENTARY INFORMATION: On March 10, 1977, the Department announced in the FEDERAL REGISTER (42 FR 13326–13336) the issuance of a preliminary finding of need to accredit testing laboratories that test thermal insulation materials as required by the 45 specification standards set out in Appendix 3 to that notice. The test methods, including recommended practices, which were referenced in those 45 specification standards, were those listed in Appendix 9 to that notice. These standards include only those sections of such standards concerned with thermal, mechanical, vapor barrier, or fire properties of thermal insulation materials.

The notice invited interested persons desiring to comment on the preliminary finding of need to submit their comments to the Assistant Secretary for Science and Technology by April 11, 1977. Further, the notice advised that any person desiring to express his or her views in an informal hearing relative to the mentioned preliminary finding should communicate that desire by March 25, 1977, to the Assistant Secretary for Science and Technology.

Following publication of the March 10 notice, written statements were received from six respondents, none of whom objected to the preliminary finding of need. Of the written comments received, two were from individual producers, one was from an association of commercial, independent testing laboratories, one was from an individual testing laboratory, one was from a technical association representing the pulp and paper industry, and one was cosigned by the three trade associations who submitted the initial request that resulted in the issuance of the preliminary finding of need in this matter and who represent approximately 90 percent of the producers of thermal insulation materials. The written comments of these six respondents are part of the public record which is available for inspection and copying in the Department's Central Reference and Records Inspection Facility, Room 5319, Main Commerce Building, 14th Street between E Street and Constitution Avenue NW., Washington, D.C. 20230. The Department received no requests for an informal hearing.

The comments on the preliminary finding of need have been carefully considered and evaluated. In addition, the Department re-examined the preliminary finding and the basis on which it was issued. A summary and analysis of the public's comments and recommendations for a final finding of need has been prepared by the Department. The summary and analysis document also reflects the Department's internal review of the preliminary finding of need. This document, which lists those members of the public that provided written comments, also is available for inspection and copying at the Department's Central Reference and Records Inspection Facility mentioned above.

Of the six written comments received from the public, only two raised substantive points. These are discussed below.

In connection with the first of the substantive points raised, it should be noted that Appendix 3 to the preliminary finding of need lists 45 thermal insulation material specifications that would serve as a basis of reference for the program for which a preliminary finding of need was made. Testing of thermal, mechanical, fire, and vapor barrier properties of thermal insulation material, as required by these specifications, would comprise the scope of the accreditation program. The applicable test methods and recommended practices are listed in Appendix 9 to the preliminary finding.

Dow Chemical U.S.A. contends that the testing of moisture and freeze-thaw resistsance of thermal insulation materials is also important and the accreditation of such testing service should be added to the scope of the proposed program. This respondent proposes one additional test method (ASTM C666), but indicates that there is no existing product specification that requires such a freeze-thaw test. Dow contends, however, that a requirement for freeze-thaw testing will become a part of various specifications in the near future.

Inclusion of a freeze-thaw test within the scope of the accreditation program without reference to an existing specification that requires such testing would be contrary to the provisions of the NVLAP procedures for such action would constitute the development of a product standard or the modification of an existing product standard. Section 7.7 (e) (2) and (3) of the NVLAP procedures prohibit such action. Accordingly, this respondent's proposal cannot be considered until such time as product specifications are developed that require the testing of freeze-thaw properties of thermal insulation materials.

The Technical Association of the Pulp and Paper Industry (TAPPI) commented regarding several tests for paper as listed in Appendix 9 to the preliminary finding of need; namely, ASTM standards D591, D826, D781, D828, D2020, and D777. TAPPI states that it is the recognized primary source for test methods in the pulp and paper area and recommends that its standards be referenced, or that both TAPPI and ASTM standards be jointly referenced in the final finding of need.

Although there are certain exceptions, it is generally agreed that existing TAPPI standards are essentially equivalent to the cited ASTM standards listed in the preceding paragraph. However, TAPPI's recommendation that its standards be referenced instead of ASTM standards is not feasible. The ASTM standards listed in Appendix 9 to the preliminary finding of need are those required by the product specification standards proposed for the accreditation program (listed in Appendix 3 to that preliminary finding). Referencing other test standards in lieu of those required by the product specifications would constitute a modification of the product standards which is prohibited by section 7.7(e)(3) of the NVLAP procedures.

TAPPI's alternate recommendation that its standards be referenced jointly with the ASTM standards cited above would seem reasonable, as long as the standards jointly referenced continue to be equivalent. As pointed out in the summary and analysis document referenced earlier herein, users of standards (and thus potential users of an accreditation program) generally use, or reference, the current issues of such documents. Therefore, it is essential that the product specification and test standards to be included in this final finding of need be referenced without dates. In this way, the accreditation program will continually be based upon referenced standards currently in effect. At this time, there is no assurance that reissues of TAPPI standards will remain essentially equivalent to reissues of ASTM standards. Accordingly, only ASTM test standards required by the product specifications are being listed in this final finding of need.

In addition to the two substantive points discussed above, several relatively minor corrections and clarifications have been made relative to the preliminary finding of need. One such correction requires the deletion of ASTM Specification C391 (Amosite Asbestos Thermal Insulation for Pipes) in Appendix 3 to the preliminary finding for the reason that this specification will be withdrawn by ASTM in November 1977. This deletion reduces the number of product standards that were set out in that Appendix 3 from 45 to 44. The list of the 44 product standards included in the scope of this program is set out in Appendix 1 to this notice. Another correction pertains to the deletion and replacement of Federal Specification HH–C–561 [Cork, compressed (corkboard) for thermal insulation] in Appendix 3 to the preliminary finding for the reason that it has been superseded by Federal Specification HH–I–525 (insulation board, thermal, cork).

There also was a need to include two test methods, ASTM method C136 (Sieve or Screen Analysis of Fine and Coarse Aggregates) and ASTM method C356 (Test for Linear Shrinkage of Preformed High Temperature Thermal Insulation Subjected to Soaking Heat) which were inadvertently omitted from Appendix 9 to the preliminary finding. A final correction results from a conclusion that ASTM test method C168 (Definition of Terms Relating to Thermal Insulating Materials) and ASTM test method C390 (Preformed Thermal Insulation Sampling) listed in Appendix 9 to the preliminary finding are not test methods or recommended practices and are not appropriate to serve as a basis for development of accreditation criteria. Therefore they are deleted from this final finding of need.

With respect to the matter of clarification, one of the items relates to whether there is a need to date product specification and test standards. It is concluded that the referenced standards indicated in the final finding of need would be the current standards in issue on the effective date of this final finding of need. Thereafter, the dates of the referenced standards would be those currently is issue.

The various corrections and clarifications referred to above are discussed in some detail in the summary and analysis document which, as was stated earlier, is available for inspection and copying at the Department of Commerce. One of the issues addressed in the summary and analysis document concerns the limitations of ASTM Test Method E84 in its ability to test the fire hazards of thermal insulation materials. Although E84 is commonly used to test the five properties of thermal insulation materials, it is generally considered inadequate for measuring the fire hazards of such materials. Accordingly, the accreditation criteria promulgated under this program to accredit testing laboratories that test thermal insulation materials will include a statement concerning the limitations of E84 that accredited testing laboratories will be required to use in reporting E84 test results.

Final Finding of Need

The joint request of Thermal Insulation Manufacturers Association, Inc., Mount Kisco, N.Y.; the National Mineral Wool Insulation Association, Inc., Summit, N.J., and the National Cellulose Insulation Manufacturers Association, Inc., Elk Grove Village, Ill., that the Secretary of Commerce find that there is a need to accredit testing laboratories which render services in the field of thermal insulation has been carefully examined and evaluated. Moreover, the earlier issued preliminary finding of need in this matter, together with the written comments submitted by interested parties in response thereto, have been carefully reviewed and analyzed. On the basis of that review and analysis, including the corrections and clarifications that have been made as a result thereof, it is hereby found that a need exists to accredit testing laboratories that test thermal insulation materials. The basis for this finding is as follows:

(a) Thermal insulation materials production exceeds $1 billion in value of annual shipments. A large percentage of this output is produced to meet requirements of 44 product standards included in the scope of this program. These product standards specify the physical properties that thermal insulation materials must have to be acceptable for insulation purposes. In addition, these product standards identify the test methods and recommended practices that laboratories will use to determine that the physical properties of thermal insulation materials meet the specified requirements. Therefore the product standards included in the scope of this program are important to commerce and consumer well-being.

(b) The 37 test methods and recommended practices included in the scope of this program are specified for use by the product standards noted above. These standard methods and practices are important to energy conservation efforts. They are used to measure those physical properties of thermal insulation materials necessary for determination of insulation effectiveness and compliance with building code requirements. Thus they serve energy conservation purposes. To the extent that they serve such purposes, the test methods and recommended practices are valid and theoretically sound. No claim is made or implied that the methods and practices are valid for serving other needs, such as health, safety, and noise abatement.

(c) Measurement of the physical properties of thermal insulation materials are prone to significant error unless the test methods and recommended practices noted above are carefully and expertly employed. As reliance is placed on such measurements for determination that the physical properties of thermal insulation materials meet requirements, such errors result in the production and use of inadequate thermal insulation materials that adversely affect the public.

(d) Increased assurance that testing laboratories correctly employ such test methods and recommended practices can be realized by the establishment of an accreditation program for laboratories that test thermal insulation materials. No accreditation program having this purpose exists either in the government or the private sector. Under procedures of the National Voluntary Laboratory Accreditation Program, a mechanism now exists to develop and promulgate nationally recognized criteria for evaluation and accreditation of testing laboratories that test thermal insulation materials, using as a basis of reference the requirements of the important product and test standards included in the scope of this program. Furthermore, experience of on-going laboratory evaluation activities in other areas indicates that site inspection and proficiency test sample services that may be required can be provided to large numbers of testing laboratories on a continuing basis, and that laboratories do request and pay costs for such services. It has also been ascertained that the costs to the government and the participating laboratories would have no major inflationary impact. Therefore it is concluded that it is practical and feasible to establish this accreditation program for the purpose of increasing assurance that testing laboratories have the competence and capability to properly conduct the test methods and recommended practices required by product standards important to the production and use of thermal insulation materials. As there is a public tendency to utilize accredited services when such services are available, it is concluded that this increased assurance of adequate testing capability will lead directly to increased availability in the marketplace of thermal insulation materials having reliably known properties.

(e) Residential and industrial use of thermal insulation materials is increasing significantly due to increasing fuel costs and interest in energy conservation. Federal and State governments are promoting increased use of thermal insulation materials through energy conservation legislation, aid to low-income families, tax rebate plans and requirements of building codes and home loan guarantee programs. Availability of competent testing services, which in turn will result in increased availability in the marketplace of thermal insulation materials with accurately stated properties, will benefit the public interest. Availability of thermal insulation materials having properties as specified will assist consumer information and guideline programs, aid the professional installer and designer of insulation systems, promote equitable trade conditions for producers and distributors, and help assure value received for expenditure of public funds. The resultant enhancement of energy conservation efforts, fuel cost savings and advantages to commerce and consumer well-being constitute the benefit to the public interest.

In view of the above finding of need, the Department hereby establishes a vol-

untary laboratory accreditation program to accredit testing laboratories that test the product, thermal insulation materials. The purpose of this accreditation program is presently limited to evaluating and accrediting testing laboratory facilities to determine their capability to conduct tests required by the applicable product standards, only to the extent that such requirements concern the acceptability and effectiveness of thermal insulation materials for use in conserving energy. The fire property test, ASTM E84, is included as a reference test method, not because it may or may not serve the needs of the public safety, but because its test results are commonly required by authorities who establish rules for the acceptability and use of thermal insulation materials. To the extent that E84 test ratings serve this latter purpose, the test method is important to the objective of conserving energy.

The applicable standards are those 44 product standards set out in Appendix 1 to this notice. The 37 test methods, including recommended practices, are those set out in Appendix 2. The applicable product standards, test methods and recommended practices included in this finding are those which are in effect on the date on which this final finding of need is published in the FEDERAL REGISTER. Thereafter, such applicable product standards, test methods and recommended practices shall be those versions that are then currently in effect. The applicable product standards include only those sections of such standards concerned with thermal, mechanical, vapor barrier or fire properties of thermal insulation materials.

The applicable test methods and recommended practices include only those sections required by the applicable product standards. Other product standards, test methods and recommended practices, not specifically referenced in this final finding of need, are part of this finding to the extent that they are referenced by and are essential to the requirements of the applicable product standards, test methods and recommended practices.

The specific sections of the applicable product standards, test methods and recommended practices, as well as those other product standards, test methods and recommended practices not specifically referred to in this final finding of need, as noted above, that will be pertinent to this accreditation program, will be set out when accreditation criteria are published in the FEDERAL REGISTER in accordance with section 7.8 of the NVLAP procedures.

Being published simultaneously with this notice is a separate notice in the FEDERAL REGISTER which announces the establishment by the Secretary of a National Laboratory Accreditation Criteria Committee for Thermal Insulation Materials pursuant to the provisions of the Federal Advisory Committee Act (5 U.S.C. App. 1 (Supp. V, 1975)). The function of that Committee will be to develop and recommend to the Secretary general and specific criteria for use in accrediting testing laboratories that test thermal insulation materials.

NOTE.—The Department of Commerce has determined that this document does not contain a major proposal requiring preparation of an Economic Impact Statement under Executive Order 11821, as amended by Executive Order 11949, and Office of Management and Budget Circular No. A-107.

Issued: October 6, 1977.

FRANCIS W. WOLEK,
Acting Assistant Secretary for Science and Technology.

APPENDIX 1:—*Product standards applicable to final finding of need* [1]

	Title
Federal specifications:	
HH-B-100	Barrier material vapor (for pipe, duct and equipment thermal, insulation).
HH-I-525	Insulation board, thermal, cork.
HH-I-521	Insulation blankets, thermal (mineral fiber, for ambient temperatures).
HH-I-515	Insulation thermal (loose fill for pneumatic or poured application) cellulosic or wood fiber.
HH-I-545	Insulation, thermal and accoustical (mineral fiber, duct lining material).
HH-I-558	Insulation, blocks, boards, blankets, felts, sleeving (pipe and tube covering), and pipe fitting covering, thermal (mineral fiber, industrial type).
HH-I-574	Insulation, thermal (perlite).
HH-I-585	Insulation, thermal (Vermiculite).
HH-I-578	Insulation pipe covering and block, thermal, (Vermiculite).
HH-I-1030	Insulation, thermal (mineral fiber, for pneumatic or poured application).
HH-I-1252	Insulation, thermal, reflective (aluminum foil).
HH-I-524	Insulation board, thermal (polystyrene).
HH-I-530	Insulation board, thermal (urethane).
HH-I-550	Insulation sleeving, thermal (urethane).
Military specifications:	
MIL-Stnd-769	Thermal insulation requirements for machinery and piping.
LLL-I-535	Insulation board, thermal and insulation block, thermal.
MIL-I-742	Insulation board, thermal, fibrous glass.
MIL-I-2781	Insulation, pipe, thermal.
MIL-I-2818	Insulation blanket, thermal, fibrous mineral.
MIL-I-2819	Insulation block, thermal.
MIL-I-15475	Insulation felt, thermal, fibrous glass, semirigid.
MIL-I-22023	Insulation felt, thermal and sound absorbing felt, fibrous glass, flexible.
MIL-I-22344	Insulation, pipe, thermal, fibrous glass.
MIL-I-23128	Insulation blanket, thermal, refractory fiber, flexible.
Maritime specifications:	
32-MA-1	Insulation: Mineral fiber, blanket type (3-8 lb/ft³).
32-MA-3	Insulation: Felt, thermal, fibrous glass.
32-MA-4	Plastic material: Thermal, cellular, urethane, rigid.
32-MA-8	Insulation: Pipe covering, urethane, thermal, rigid.
ASTM specifications:	
C262	Mineral fiber batt insulation (industrial type).
C516	Vermiculite loose fill insulation.
C517	Diatomaceous earth block and pipe thermal insulation.
C533	Calcium silicate block and pipe thermal insulation.
C549	Perlite loose fill insulation.
C553	Mineral fiber blanket and felt insulation (industrial type).
C592	Mineral fiber blanket insulation and blanket-type pipe insulation (metal-mesh covered) (industrial type).
C610	Expanded Perlite block and pipe thermal insulation.
C640	Corkboard and cork pipe insulation for low-temperature thermal insulation.
C665	Mineral fiber blanket thermal insulation for wood frame and light construction buildings.
C728	Perlite thermal insulation board.
C764	Mineral fiber loose fill thermal insulation.
C739	Celulosic fiber (wood-base) loose-fill thermal insulation.
C578	Preformed, block-type cellular polystyrene thermal insulation.
C591	Rigid preformed cellular urethane thermal insulation.
C532	Structural insulating formboard (cellulosic fiber).

[1] Excluding requirements other than those related to testing of thermal, mechanical, fire and vapor barrier properties.

APPENDIX 2.—*ASTM test methods, and recommended practices applicable to final finding of need*

ASTM designation:	Title
C177	Steady-state thermal transmission properties by means of the guarded hot plate.
C518	Steady-state thermal transmission properties by means of the heat flow meter.
C335	Thermal conductivity of pipe insulation.
C236	Thermal conductance and transmittance of built-up sections by means of the guarded hot box.
C653	Recommended practice for determination of thermal resistance of low-density mineral fiber blanket-type building insulation.
C687	Recommended practice for determination of thermal resistance of low-density fibrous loose fill-type building insulation.
C167	Tests for thickness and density of blanket- or batt-type thermal insulating materials.
C302	Test for density of preformed pipe-covering-type thermal insulation.
C303	Test for density of preformed block-type thermal insulation.
C519	Test for density of fibrous loose fill building insulations.
C520	Test for density of granular loose fill insulations.
D1622	Test for apparent density of rigid cellular plastics.
C136	Sieve or screen analysis of fine and coarse aggregates.
C585	Recommended practice for inner and outer diameters of rigid thermal insulation for nominal sizes of pipe and tubing (NPS system).
C356	Test for linear shrinkage of preformed high-temperature thermal insulation subjected to soaking heat.
C355	Tests for water vapor transmission of thick materials.
D2842	Test for water absorption of rigid cellular plastics.
D2126	Test for response of rigid cellular plastics to thermal and humid aging.
D591	Test for starch in paper.
C272	Test for water absorption of core materials for structural sandwich constructions.
D756	Tests for resistance of plastics to accelerated service conditions.
C411	Test for hot-surface performance of high-temperature thermal insulation.
C450	Recommended practice for prefabrication and field fabrication of thermal insulating fitting covers for NPS piping, vessel lagging, and dished-head segments.
C165	Test for compressive strength or preformed block-type thermal insulation.
C203	Test for breaking load and calculated flexural strength of preformed block-type thermal insulation.
C446	Test for breaking load and calculated modulus of rupture of preformed insulation for pipes.
D1621	Test for compressive properties of rigid cellular plastics.
D781	Tests for puncture and stiffness of paperboard, corrugated and solid fiberboard.
D828	Test for tensile breaking strength of paper and paperboard.
C209	Testing insulating board (cellulosic fiber), structural and decorative.
C273	Shear test in flatwise plane of flat sandwich constructions or sandwich cores.
E84	Test for surface burning characteristics of building materials.
E136	Test for noncombustibility of elementary materials.
E96	Test for water vapor transmission of materials in sheet form.
D2020	Tests for mildew (fungus) resistance of paper and paperboard.
C445	Test for normal total emittance of surfaces of materials 0.01 in or less in thickness at approximately room temperature.
D777	Test for flammability of treated paper and paperboard.

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[3510-19]

NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM

Establishment of Criteria Committee for Thermal Insulation Materials

In a separate notice appearing in this issue of the FEDERAL REGISTER, the Department of Commerce announced the issuance of a final finding of need to accedit testing laboratories that test thermal insulation materials. Accordingly, pursuant to paragraph (h)(3) of section 7.4 of the Procedures for a National Voluntary Laboratory Accreditation Program (15 CFR Part 7) and the Federal Advisory Committee Act (5 U.S.C. App. I (Supp. V, 1975)) notice is hereby given that the Secretary of Commerce has determined, after consultation with the Office of Management and Budget, that the establishment of the National Laboratory Accreditation Criteria Committee for Thermal Insulation Materials is in the public interest in connection with the performance of duties imposed on the Department by law.

The Committee's duties will be to develop and recommend to the Secretary general and specific criteria to accredit testing laboratories that test thermal insulation materials. The factors to be considered by the Criteria Committee in the development of such recommended criteria will be those set forth in paragraphs (a) (1) and (2) of section 7.7 of the referenced Procedures. The criteria developed by the Committee will be in accordance with the terms and conditions set out in subsections (b), (c), and (d) of section 7.7 of the Procedures. Furthermore, in accordance with subsection 7.8(c) of the referenced Procedures, the Committee will provide to the Secretary its evaluation and recommendations regarding written and oral comments submitted by interested parties on the proposed criteria published by the Secretary in the FEDERAL REGISTER.

The Committee will consist of twenty-one members from the government and private sectors. For balanced membership the Committee will have the following composition:

Federal agency interests	6
State or local government interests	4
Private sector interests (producers, distributors, users, consumers, academia, testing laboratories, general interest groups)	10
Department of Commerce (Chairman)	1
Total membership	21

Private sector Committee members will be appointed by the Secretary for two-year terms. Individuals representing Federal or State or local government in-

terests will be appointed by the head of the agency or organization concerned for two-year terms. The Committee Chairman will be the Department's Deputy Assistant Secretary for Product Standards.

Members of the Committee will be selected on the basis of their specialized experience relating to the manufacture and use or knowledge of thermal insulation materials. Persons desiring to serve on this Criteria Committee should submit a letter to Dr. Howard I. Forman, Deputy Assistant Secretary for Product Standards, Room 3876, U.S. Department of Commerce, Washington, D.C. 20230. The letter should include a statement of the applicant's qualifications in terms of education and experience in the field of thermal insulation materials and the affected interest that such applicant would wish to represent.

Members of the Committee will not be compensated for their services. They shall, upon request, be paid travel expenses incurred in the performance of their duties for the Committee as authorized by the Department of Commerce travel regulations. The Committee will meet as often as necessary to perform its functions within the time limits established by the Secretary under subsections 7.6(d) and 7.8(c) of the referenced Procedures. It is estimated that the Committee will meet at least four times during the first year.

The Committee will function solely as an advisory body, and in compliance with the provisions of the Federal Advisory Committee Act. Its charter will be filed under the Act 15 days from the date of publication of this notice.

Interested persons are invited to submit comments regarding the establishment of the National Laboratory Accredition Criteria Committee for Thermal Insulation Materials. Such comments, as well as any inquiries, may be addressed to Dr. Howard I. Forman, Deputy Assistant Secretary for Product Standards, Room 3876, U.S. Department of Commerce, Washington, D.C. 20230 (202-377-3221).

Issued: October 5, 1977.

GUY W. CHAMBERLAIN, JR.,
Acting Assistant Secretary for Administration.

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